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ABSTRACT

The state of corporate training research conducted by education departments at universities throughout Europe was examined. The study, which was based on a literature search and limited survey, focused on research concerned with the design, development, and evaluation of training and research on learning processes in corporate settings. Among the review's main findings were the following: (1) studies of the relationship between educational level and employment are conducted at the supranational level by the European Centre for Vocational Training and are often conducted at the national or regional levels; (2) at the organization level, most studies focus on describing/analyzing important determinants of training decisions within organizations; (3) some researchers concentrate on specific learning programs or type of programs; (4) only a limited number of researchers examine learners and learning in corporate settings; (5) studies conducted in the design phase of training generally elaborate procedures for designing instruction and/or describe the variables affecting the design process; (6) the development/delivery phase of training has received much attention, whereas evaluation of training is barely studied; and (7) most studies are descriptive, and only a few test specific interventions. (Appended is a list of 40 European corporate training researchers' affiliations/addresses). Contains 37 references. (MN)

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European Research on Corporate Training

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ED 375 253

0. Introduction

In this paper, an overview of European research on corporate training is presented. This is, however, not an easy endeavour due to many constraints. Some of them are typical of reviewing literature on training, like the spread of information over difficultly accessible sources, the turbid mix of research, development and practice, and the unequal conceptual, methodological and empirical quality of the documents (see Campbell, 1971). Other factors refer to the complexity of the European scene, with its fan of different cultural settings, languages, and training traditions in corporations (see Auer, 1992). Additionally, the interdisciplinary character of corporate training research is reflected in a variety of sources and a diverse nature of publication back-up, each discipline having its own journals which, in turn, are often broken down into theoretical or applied categories (d'Iribarne, 1993).

This study intends to explore the current state-of-the-art of corporate training research in Europe conducted by educational departments at universities. It focuses on design, development, and evaluation of training on the one hand and on learning processes in corporate settings on the other (note 1). In order to prepare this study, both a literature search and a limited survey were made. Prior to the description of the results, the following remark is to be made. The perspective taken in this study is very limited. No attempt has been made to cover all kinds of disciplines (e.g. economics, management) related to corporate training. The exploration aimed at finding out what kind of studies are actually executed in Europe, a context where there is almost no tradition of studying instructional and learning processes in out-of-school settings for adults.

Three perspectives are taken in order to discuss the outcomes. Firstly, research reports and current research efforts are grouped on different levels. Indeed, training issues emerge at various levels and hence, each research project can be situated on one of these levels. Secondly, the research reports and current endeavours are located on a specific stage in the training design process. Thirdly, an attempt is made to group the results into more encompassing research categories. In each section, examples of studies are presented, followed by more general observations to be tested in a follow-up study. Finally, ideas and views from the professional literature are brought together so as to describe the main trends and to give a tentative account for the findings.

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1. European research scene and 'educational' systems

1.1 The slow evolution towards research in corporations

Educational research in Europe has for a long time been almost exclusively oriented toward formal school systems. The influence of scholars in the field of developmental psychology, like Piaget (1952) and Vygotsky (1978) called for research on cognitive and emotional development of young children in pre-school and elementary school settings. Instructional psychology investigated primarily learning processes in basic subject-matter (3 R's), like reading, writing and arithmetics. Due to the democratisation tendency during the sixties, and the increased access of students to secondary and tertiary education, broader studies have been conducted by educational scientists. Curriculum development, educational objectives, pupil characteristics, teaching methods, organisational issues (setting, streaming), educational technology and assessment became hot topics in research, aiming at raising the quality of education along with the scale-up of schools (see Frey, 1972). At that time, adult education was highly influenced by the 'humanist' tradition in terms of personal development and general education, and it was almost exclusively organised within informal settings (see Jarvis, 1987). Drastic changes in the economical, demographic and social scene in the seventies brought about the need for high-quality professional education and paved the way for 'open universities' and 'distance learning', closing the gap between universities and industry. Until recently, corporate training was a highly practical field in which 'rules of the thumb' and the delivery of knowledge and skills in off-site training contexts were dominant. However, influenced by rapid changes and an increasing complexity of training in corporations, more systematic and research-based approaches gained attention. The shift from teaching to learning (see Nyhan, 1991) as evidenced in the 'learning organisation' paradigm, created necessary conditions for an input of instructional psychologists into training departments. Though the onset for interesting developments is present, both the divergency and nonempirical nature of many training endeavours inhibit a full development of research on corporate training (see Lowyck, 1994).

1.2 Divergency in European corporate contexts

The flexible adjustment of industry to new challenges is perceived as a common task agreed upon by policy-makers on all levels. Quantitative and qualitative changes in goals, organisation and structure of corporations will elicit high-level behaviours which, in turn, necessitate increased and continuing training and learning (see Offerman and Gowing, 1990; Schmid, 1990). Notwithstanding this general agreement, a world of differences and disagreements exists at the European level in terms of concrete objectives and means. Moreover, the objectives of the emerging Europe are based on a contradictory challenge : competition between European countries, an area in which European Union Member States have adopted an antagonistic position, and social cohesion, an area in which the countries have to show solidarity with each other (d'Iribarne, 1993).

Auer (1992) points to possible discrepancies between the interests of management, trade unions, and governments despite continuous efforts of the European Union to build a common strategy. Moreover, each country reflects different traditions and regulations, like the dual system in Germany, the government as the

regulator in France, the 'social-partner' system in Denmark, the market driven approach in Great Britain, and the regional differences approach in Italy. This leads to striking differences in, for instance, training efforts in European countries, ranging from around 20% of employees participating at training efforts in Denmark and the Netherlands, to nearly 1% in Greece and Portugal (see Fox, 1990; Mulder, e.a., 1990).

Besides differences in management of training in corporations, universities also differ in their relationship with corporations. Most contacts of universities with industry started with the extrapolation of principles and methods from school-based instructional psychology into corporate settings while few attention is paid to the intrinsic characteristics of the setting and the target group. Examples in the literature are the conceptual frameworks, being mere translations of school concepts into corporate terminology, like 'trainee' instead of 'student', 'job' instead of 'task', 'trainer' instead of 'teacher'. Another range of links between universities and corporations are consultancy rather than research activities by academics. The gradual decrease of financial resources at universities, which forced researchers to look for external funding, strengthened cooperation between university people and training responsibles in corporations. However, extensive research projects on training and learning seldomly occur.

2. Conceptualisation of research on corporate training

It is evident that a complex phenomenon needs some structuration in order to make it accessible for reviewing. And, though each structure imposes limitations, it nevertheless allows to focus more systematically on common features and differences. We will formally organise the report in both a vertical (levels) and a horizontal (stages) way. This formal structuration will be completed by categories which refer to more encompassing studies at hand.

2.1 Levels of training endeavours

In order to categorise more easily a complex phenomenon in a given domain, a current practice is to distinguish between some levels of activity. Brinkerhoff (1987), for instance, puts evaluation endeavours in corporations on one of the following levels : reaction, knowledge, application and organisation. In a similar vein, research on corporate training can be situated on different levels. A first level pertains to the analysis of large strategic issues about corporate training, as reflected both by (supra-)national bodies for policy-making and federations or consortia of organisations. The second level refers to the organisation level of particular corporations. Research contributes to the clarification and/or support of decision-making on training within a specific organisation. The third level relates to the study of design, development and delivery of training programmes and activities. At the fourth level, learning itself is focused upon. It is investigated if and to what extent learning takes place, and how learning models underlying corporate training are dealt with. While the first two levels mainly depict strategical issues, the third and fourth level's focus is on concrete training programmes and the learning that may take place.

2.1.1 Strategic level

Typical examples of research at the strategic level are studies executed by CEDEFOP "Centre Européen pour le développement de la formation professionelle" (European Centre for vocational training) in Berlin. In one of their projects, together with European Training Systems (Belgium), the relationship between the 'educational level' and employment is investigated. This project aims at a better understanding of the need for current qualifications within the member states of the European Union and necessary changes in competencies.

Besides supra-national studies, strategic research is often executed at the national or regional level. The 'Arbeitsgemeinschaft Betriebliche Weiterbildungsforschung' (Working group on research on continuing professional education) in Bochum, Germany, for example, investigates the kind of training needed for employees with lower and average educational levels in the five new German federal states 'Neue Bundesländer'. The current state of training in former East-Germany is analysed in order to determine which promising training models and practices can be transferred from Western Germany to the new states (former Eastern Germany). Another instance is the search for national standards for training and development in the U.K. (see Graham, 1991), organised by the Training and Development Lead Body. This study resulted from a survey with the participation of 350 organisations from all sectors of the economy.

2.1.2 Organisation level

At the organisation level, most studies focus on the description and analysis of important determinants of training decisions within an organisation. At the University of Leicester, for instance, Felstead explores the impact of recession on training practices of employees. This project aims at identifying which types of companies reduce or increase their training activities in recession periods. Also in the United Kingdom, the implementation of open-learning methods and its effect at the organisational level is studied by the Open Learning Unit, Stafford. At the University of Gent (Belgium), Van den Broek (1987) studied the value of a functional model to explain the educational, instructional and training processes. Gradually, the concept of a 'learning organisation' is used as a vague framework for research about training at the work place. Simons (1993), for example, investigated the role of line-managers as learning counsellors, instructors and transfer-agents.

2.1.3 Training programmes

Some researchers analyse particular (types of) training programmes rather than to focus on training measures at the strategic or organisational level. At the University of Ulster (Ireland), for instance, Shanahaw investigates the usefulness of university-based programmes to enable particular social groups to become more economically productive. At the same level, but very differently, van der Meij at the University of Twente (the Netherlands) studies the design of minimalist documentation. Though most training methods in corporations are merely adaptations from current school teaching and training methods, some exception is made by Teurlings from Tilburg University (the Netherlands). She explored the effects of the so-called 'Leittext' method.

developed in Siemens Inc., on self-regulation in learning and working in a training course for mechanics of Philips Lighting Roosendaal (Teurlings, 1990).

2.1.4 Learners and learning

Learners and learning in corporate settings are studied by a limited number of researchers only. Zucchermaglio at the 'La Sapienza' University of Rome, Italy, investigates, in view of fostering learning in organisations, how newcomers learn to know their organisation, how they acquire the needed expertise and how this expertise interacts with the old one. In Sweden, at the University of Linköping, Bron studies the formal and informal learning processes of train drivers. Opportunities for informal learning are identified and requirements in matters of attainment of knowledge, abilities, and attitudes at the work-place are investigated.

2.1.5 Intermediate discussion

From a more in-depth analysis of the survey, the following observations call for corroboration by more systematic follow-up studies :

(1) Studies sponsored by the European Union are mainly situated on the strategic level. They primarily aim at the identification of new types of qualifications and a better adaptation of the formal school system to the needs of business and industry.

(2) Strategic research emerges when countries, (supra-)national bodies or consortia of organisations are confronted with new challenges. In some cases, specific training endeavours or current educational practices are perceived to be able to solve this problem or to meet the challenges. For instance, open-learning schemes are far more implemented in the U.K. than in any other European country.

(3) Decision-making on training at the organisation level is hardly studied. If this is the case, a strategic rather than a professional perspective is taken. It is investigated who contributes decision-making in training and which responsibles or bodies influence decision-making, rather than to analyse the criteria, the underlying theories or models they hold. An illustration of this observation is the large quantity of articles on the role of the trainer in 'learning organisations'.

(4) Studies at the training programme level seem to mirror regular education settings. It is for example investigated how methods, education plans, and practices which are extensively used in regular education, can be applied in or for business settings.

(5) The sheer absence of studies at the learner level may be due to the fact that up to now, corporations are not acquainted with this type of studies. Maybe the unit of analysis is too narrow or the concrete learning process too far away from the interest and mental frameworks of responsibles at the organisation level. Following Nadler (1979), learning is not the goal of training. Learning results must be further 'processed' within and through interaction with other processes in order to add value. Brinkerhoff and Gill (1992) contend that "training is intended to add value through the transformation of learning into changed job performance. Learning alone does not add sufficient value to justify the costs of training" (p. 124).

2.2 *Stages in the design process*

Another entry for the analysis of research endeavours is to define at what stage of the training process studies are made. Typically a comprehensive training process entails at least four stages : (1) analysis of the actual situation and the identification of training needs, (2) design of training which encompasses construction of a blueprint of the training, (3) development and delivery of training, and (4) evaluation of training.

2.2.1 Analysis of the entry-situation

The analysis phase comprises two categories of studies. First, it encompasses policy-like studies that are not tight to the development of specific training programmes but are oriented toward establishing an overall knowledge-base for decision-making. The second category contains studies directly focused on the design of training. They can be situated in the pre-training stage. It is investigated what kind of analysis is needed and what factors affect this analysis. An example of the first category is the study of Carter and Lindsay at the 'Continuing Education Research Unit', City University of London. They investigate the training policy of employers and, specifically, which students are sponsored by their employers to do what kind of training under what conditions. At the University of Leeds (United Kingdom), an analysis was made of both obstacles which inhibit employees in the retail sector from participating in company training and the potential of competency based training in corporate training (Payne, Forrester, & Ward, 1993).

At High Peak College (Derbyshire), Price investigates the qualifications for managers of youth hostels in view of a training programme for these managers. The main research question of this study is : "How can one common qualification system with common standards of assessment be developed for 10 different countries ?" At a more fundamental level but also pertaining to the analysis phase, differences between expert and novice presenters in a foreign language were identified at the University of Leuven (Belgium) (Elen, Cornu, & Rosseel, 1994) through means of an expert-novice study.

2.2.2 Design

Studies in the design phase of training focus on the elaboration of procedures for designing instruction, studying the actual way in which designers work and/or describing the variables that affect the design process and product. In the 'Rural tourism development project', Lane (University of Bristol) tests the idea of using continuing education groups as a means for introducing and implementing sustainable tourism development in rural communities. Teaching formats, methods and materials that can be employed for acquiring as well as applying theoretical concepts in such programmes are investigated. A lot of work at the design level is currently done at the University of Twente, the Netherlands. Kessels (1994) from the Foundation for Corporate Education, investigated in his doctoral dissertation the three following interrelated questions : "(1) Which factors in curriculum design influence the quality of corporate education ?, (2) How do these factors operate ?, and (3) Can design standards be formulated to control the identified factors ?". Pieters and Van der Meij focus on the design process itself. It is wondered why expert designing is so different from what design models put

forward. An analysis is made of the cognitive activities and knowledge-base related to the design process. Finally, the identification of tools that may support the cognitive activities of designers is aimed at.

2.2.3 Development and delivery

The development/delivery phase of training attracted a lot of attention in the actual work of universities and training bodies. Various reports pertain to the usefulness of specific technologies (e.g. Mason & Bacsich, 1994) and, especially in the United Kingdom, the design and implementation of open learning schemes (e.g. Race, 1994; Thorpe, 1993). In the United Kingdom, a Training Directory is yearly published that lists all training organisers and their programmes. Research on the actual development and delivery of training, however, is under-emphasised. At the University of Leicester, a literature review was made contrasting theoretical approaches with the delivery of learning at work. For more than 15 years at Brunel University, West-London (Center for the Study of Human Learning), it is investigated how 'growth-in-capacity-to-learn' can be supported in individuals, teams and organisations (Harri-Augstein and Thomas, 1991). This work is based on the conversational learning theory of Pask. Most of this research is action-research. Finally, at the University of Lancaster, and sponsored by the European Union, the Centre of Studies in Advanced Learning Technology focuses on the specification and development of advanced authoring tools.

2.2.4 Evaluation

The outcomes of our exploration of research efforts suggest that evaluation of training is hardly studied. Nevertheless, a large amount of evaluation activities are carried out. At the University of Leuven (Belgium), a project is started in collaboration with a professional organisation of training responsibles, to investigate what evaluation means to responsibles in corporate settings and to identify specific locations in the organisation where evaluation takes place. Ward at the Guildford Educational Services, investigates methods that can be used to assess through means of computers the learning effects of training programmes in individuals. Recently, some evaluative research is done as to the effectiveness of learning on the work place. Verdonck (Foundation for Technology in Flanders), for example, developed a check-list to measure the orientation on learning at the work place. The value of learning at the work place became a hot topic in the Netherlands (de Jong, Utrecht University; Simons University of Nijmegen; Pieters, University of Twente). Most of these studies are either part of the transfer problem of training results or explore the learning power of the work place itself, including job-aids.

2.2.5 Intermediate discussion

Building on the outcomes of this part of the survey, the following comments can be made :

(1) At this stage in European research, attention has been primarily paid to the analysis and design phases of the design process. Development, delivery and evaluation have attracted minimal research attention. Research on these aspects seems to be negatively correlated with the many activities carried out by both

universities and corporations in this area and, due to the technological orientation of European R&D programmes such a DELTA, this research mainly focuses on identifying problems for available technological devices or solutions. Most activities are based on conceptual analyses of concrete problems and not on a well-validated scientific knowledge-base.

(2) While analysis of training needs is emphasised by projects sponsored by the European Union, and mainly executed in Germany and the United Kingdom, most of the research projects related to the design of training are executed in the Netherlands.

(3) There is a trend to focus evaluation research on on-the-job learning. This has probably to do with the acknowledgement that off-site training lacks transfer power and is seldomly 'just-in-time' (Gery, 1989).

In contrast with the outcomes of this explorative survey which did not reveal a stable set of studies directly pertaining to the design of training, the professional literature, however, reflects many attempts to get a grip on the concept of the learning organisation. The shift from teaching to learning, the importance of motivating personnel to learn, the organisational implications, and the potential of workplace learning are only a few currently discussed issues that are related to the vague concept of the 'learning organisation'.

2.3 Research categories

Not all research can be grouped into levels or phases. Indeed, some projects focus on specific target groups such as older trainees or women. Other projects put forward methodological questions. They investigate research methodologies to study training issues that can be used in business settings.

Research in different fields can be situated in the descriptive-correlational-experimental research cycle (see Rosenshine and Furst, 1973; Nuthall and Church, 1976). When a phenomenon is new or the researchers have limited experience in a given domain, the research endeavours are oriented towards the description of the phenomenon at hand in order to familiarise researchers with the content and context. This explorative description phase is, then, followed by attempts to build and test models which provide a parsimonious means for representing the situation and to specify relationships between elements in terms of hypotheses. These models provide an impetus for testing hypotheses and to contribute to theory building. Indeed, models of training and learning can be used to investigate and explain practices in real environments and they also provide the basis for more intervention-like studies. In such studies, a systematic attempt is made to change the actual situation in a well-defined direction and to investigate the relative importance and interrelationship of variables. By investigating at which point on the cycle current research can be placed, one can yield insight into the current state of a research field. Given the novelty of the research domain, one may predict European research on corporate training to be situated at a descriptive, explorative point on the cycle.

Indeed, most studies from the survey belong to a descriptive category. Current practices are described. Survey-research, interviews, discussion-groups, and analysis of documents and literature are some of the methods used to gather descriptive data. The 'Arbeitsgemeinschaft Betriebliche Weiterbildungsforschung', for instance, initiated a project to describe the actual situation with regard to vocational training and professional education

in former East-Germany. At the University of Huddersfield (United Kingdom), Evans analyses policy-making with regard to training by describing and analysing actual policy-making decisions. Literature-reviews can also be situated in this category. Such type of study was made at the University of Leicester to detect factors that affect motivation of professionals for lifelong learning (Maguire, Maguire and Felstaed, 1993).

Although some descriptive studies can be labelled s evaluation studies, they rarely test the model underlying the evaluation activities. Consequently, it seems that most evaluation studies are a-theoretical and oriented toward improving practice rather than to contribute to building and testing research models. A relatively large number of studies, however, indicates to build or test models. Some reasons account for this possible misunderstanding. Firstly, 'model' mostly refers to a collection of practices rather than to a reduced scientific theory. Secondly, studies which indicate to aim at the development of an instructional model often are labelled as related to model-building and -testing. At the University of Bristol, for instance, strengths and weaknesses of educational systems are assessed by Hughes and Thomas in view of their contribution to continuing education of professionals. At the University of Leeds (United Kingdom), workplace learning is investigated by identifying competing outcomes that result from employee development assistance programmes. Various projects executed at the University of Twente could be mentioned here. Van Merriënboer, for instance, heads a project that aims at broadening the theoretical basis fofor instruction for learning fault management skills, and at the development of prescriptions for instructional tactics for designing a decision support system as well.

Only a few studies have been found that aim at testing specific interventions. Strittmatter at the University of Saarland (Germany), reports a study on the effects of cooperative learning in which two groups (one in an individual mode, the other in a cooperative one) were compared during interaction with a multi-media computer programme about working in the postal service. Van der Meij (University of Twente, the Netherlands) compared two versions of a manual (an extensive and a minimalist one) and studied the effects of error-information on users.

The exploration of the above mentioned research topics induces the following comments :

(1) The European Union is not yet a reality but has still to be worked out. International cooperation is an explicit goal of the European administration. Hence, initiatives aiming at the creation of international networks are heavily sponsored. International cooperation between different countries from various regions is even a condition for being sponsored by the European Union.

(2) The large number of descriptive studies indicates the state of the art in research on training in corporate settings. When hardly anything is known about the core problems in European corporate settings, it is not surprising that one first wants to find out what these problems are. This implies a description of the actual situation. Descriptions of the actual situation are needed as to promote mutual understanding.

(3) The novelty of the domain also induces discussions about the role of research and the issues that are most important to study (e.g., Achtenhagen, 1992). Even this paper is an example of it.

(4) The research situation, however, strongly differs from country to country. Research centres in different countries pay attention to different issues and they also use a different methodology. Instructional

psychological research is most prominent in the Netherlands and in Germany. Descriptive research and action-research is executed mostly in the United Kingdom. It is important to note that hardly any research centres where found in the Southern part of Europe. In France, certainly much is going on but language constitutes a real barrier here. Also in Spain, Italy, Portugal and Greece, training issues are discussed and investigated in one way or the other. Research centres in these countries seem, however, to be more isolated from the rest of Europe. Again, language differences may provide an explanation.

3. Discussion

Research on corporate training reflects both the development in regular education and the current state-of-the art of corporate training activities and issues in each country. As previously mentioned, traditions and regulations within each country define the way in which the government, managers and employees organise corporate training and decide about training issues. Moreover, the culture of research at universities determines to a large extent the possible interaction between research and practice. Despite, or perhaps due to, many incentives at the level of the European Union, the focus is more on the strategic and organisational level. The detection of a mismatch between available competencies and industrial needs seems to be dominant in order to be able to adjust the European workforce as to preserve the survival of the industry. At the organisational level, training needs both integration into the overall strategy of corporations and tuning in other measures, like selection, career planning, reward systems, job re-design and high-technology support. At the training level, there is a lack of a systematic instrumentation and integration of well-adapted training methods. Basic research outcomes have not yet been translated into corporate training and hence, their usefulness is underestimated. At the learning level, finally, more emphasis is put on the description of desirable learner characteristics than on an intruding analysis of new learning processes as claimed by advanced instructional psychology.

Moreover, the idiosyncratic features of research traditions are reflected in the research work in different countries. The Netherlands, for example, are very prominent in research domains, like instructional psychology and instructional design. It is not surprising therefore to find that they also focus on design issues in training research. A lot of research in Great-Britain is devoted to the open learning scheme as first developed by the British Open University. Moreover action- research seems to be a well-accepted and frequently used methodology. In Germany, research on training is influenced by the vocational training tradition.

Research is not equally distributed over the different countries. Experimental or quasi-experimental research is almost exclusively done in the Netherlands and Germany. Research in Southern Europe is often technology-driven, as a consequence of the incentives from European research programmes to close the technological gap between the North and South. Research in France seems to have little communication with research in other parts of Europe, possibly due to their own research tradition and isolation from the Anglo-Saxon world.

A contrast can be observed between the claimed importance of some research topics and the actual research investments especially in European R&D programmes. Examples of research questions that have attracted only minimal European research attention, are :

(1) how to support and build on individual differences in training;

(2) what is the impact of European policy-making on professional qualifications and training measures in different countries;

(3) what are the characteristics of a well-structured and systematic approach to promote capacity-for-learning (learning to learn, self-regulation, metacognition, cooperative learning) in business settings;

(4) what is the impact of cultural differences on training in Europe and how can these differences be build upon in fostering European cooperation;

(5) what is the meaning, effectivity and efficiency of organisational learning;

(6) how do new concepts about learning in organisations affect the role and training of trainers in such organisations;

(7) how to design the training of specific target groups in view of drastic changes in the economical scene, like underemployed people, women, older employees and untrainables, with an emphasis on raising performance, motivation and self-esteem;

(8) what is the relationship between work organisation and learning at the work place;

(9) how to avoid hindrances in training endeavours, due to the blurred conceptual framework and the non-empirical character of many studies at hand, and

(10) how to construct strong conceptual frameworks for communication between researchers and practitioners in the field of corporate training in terms of networking, taking the many different traditions and language barriers into account.

Finally, the work done by means of this survey only provides some building blocks for further endeavours in terms of coordination and synergy. Due to the enormous complexity of the European scene, the isolation of many researchers (economists, sociologists, psychologists,..) and the intertwining of training, organisational and cultural issues, priority has to be given to modelling the research area. It is an interesting observation that the evolution in research on training and learning in corporate settings shows in general parallel trends as evidenced in the articles published in the Annual Review of Psychology from 1971 to 1992 (see Campbell, 1971; Goldstein, 1980; Wexley, 1984; Latham, 1988; Tannenbaum and Yukl, 1992). It would be a waste of time and energy to isolate European research from the work already done in a vast tradition of corporate training research all over the world.

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Note 1 :

The description of research on corporate training is based on a double attempt. First, the literature in the databases EUDISED (European documentation and information system for education), CEDEFOP (Centre Européen pour le développement de la formation professionelle), BIE (British Education Index), DION (Documentair Informatiesysteem voor onderwijs in Nederland) and ADION (Automatisch documentatie- en informatiesysteem voor onderwijs in Nederland) were searched. Additional publications and references were relevant to this study were added to the final list. Second, a questionnaire (Appendix 1) was mailed to addressees from mailing lists of two research associations (EARLI 'European Association for Research on Learning and Instruction' and ESREA 'European Society for Research on the Education of Adults') and one professional organisation (ECLO 'European Consortium for the Learning Organisation'). In order to represent research supported by the European Union, the FORCE Compendium was screened, FORCE being one of the European action programmes for research, development and networking related to training, especially in small and medium-sized enterprises. From both the ECLO mailing list and the FORCE Compendium, only universities or research institutes were selected. Finally, respondents were asked to provide additional addresses of persons and/or institutes involved in research on corporate training. In total 351 questionnaires were mailed. Only 64 questionnaires were returned. This is eventually due to the broad scope of the mailing lists, the tentative nature of the study, the open definition of research on training and development, the lack of tradition in research on training and the weariness of people to respond continuously to questionnaires. Hence, no firm conclusions can be drawn from this study, though it may cast a first glance at the nature and trends of European research on corporate training.

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